PHILIPS TECHNICAL REVIEW

CAV.

VOLUME 13

1951/1952

PHILIPS RESEARCH LABORATORIES - EINDHOVEN

CONTENTS

VOLUME 13, 1951/1952

LIGHT

Page

Flicker in television pictures, by J. Haantjes and F. W. de Vrijer 55

A new high-pressure mercury lamp with fluorescent bulb, by J. L. Ouweltjes, W. Elenbaas and K. R. Labberté 109

Page

New phosphors for fluorescent lamps, by J. L. Ouweltjes 346

High-pressure mercury vapour lamps for photo-copying processes, by W. Elenbaas and K. R. Labberté 323

TELECOMMUNICATION

New electronic tubes employed as switches in communication engineering, by J. L. H. Jonker and Z. van Gelder,
I. Contact tubes 49
II. Switch tubes 82

Flicker in television pictures, by J. Haantjes and F. W. de Vrijer 55

The image iconoscope, a camera tube for television, by P. Schagen, H. Bruining and J. C. Francken 119

The wire capacitor and other composite drawn products, by J. L. H. Jonker and P. W. Haaijman 145

A simple ionosphere sounder, by R. Aschen and P. Gaillard 152

Velocity-modulation valves for 100 to 1000 watts continuous output, by B. B. van Iperen 209

A through supergroup filter for carrier telephone systems on coaxial cable, by J. F. Klinkhamer 223

Delta modulation, a new modulation system for telecommunication, by J. F. Schouten, F. de Jager and J. A. Greefkes 237

Some applications of Ferroxcube, by W. Six 301

Flywheel synchronization of saw-tooth generators in television receivers, by P. A. Neeteson 312

Thermionic emitters under pulsed operation, by R. Loosjes, H. J. Vink and C. G. J. Jansen 337

X-RAYS

Special X-rays tubes, by B. Combée and P. J. M. Botden 71

Collimating X-rays in beams of very small divergence and high intensity, by J. A. Lely and T. W. van Rijssel 96

Fluorography with the aid of a mirror system, by W. Hondius Boldingh 269

SOUND

New developments in the gramophone world, by L. Alons 134

ELECTROTECHNICS

The wire capacitor and other composite drawn products, by J. L. H. Jonker and P. W. Haaijman 145

Automatic welding with Contact electrodes, by W. P. van den Blink, H. Bienfait and J. A. van Bergen 247

Electric fencing of grazing land, by F. H. de Jong and L. W. Roosendaal 328

MEASURING EQUIPMENT

Measuring the dielectric constant and the loss angle of solids at 3000 Mc/s, by M. Gevers . 61

Measuring rapidly fluctuating gas temperatures, by B. H. Schultz 104

Apparatus for testing transistors, by P. J. W. Jochems and F. H. Stieltjes 254

Geiger-Müller counters, by N. Warmoltz . 282

An indentation meter for paint, by J. Hoekstra and J. A. W. van Laar 352

MATERIALS AND THEIR RESEARCH

Page

New views on oxidic semi-conductors and zinc-sulphide phosphors, by E. J. W. Verwey and F. A. Kröger 90

Ageing phenomena in iron and steel after rapid cooling, by J. D. Fast 165

Internal friction in iron and steel, by J. D. Fast and L. J. Dijkstra. 172

The magnetic and electrical properties of Ferroxcube materials, by J. J. Went and E. W. Gorter 181

Ferroxdure, a class of new permanent magnet materials, by J. J. Went, G. W. Rathenau, E. W. Gorter and G. W. van Oosterhout 194

Page

The structure of glass, by J. M. Stevels . . . 293

Some applications of Ferroxcube, by W. Six . 301

Thermionic emitters under pulsed operation, by R. Loosjes, H. J. Vink and C. G. J. Jansen 337

New phosphors for fluorescent lamps, by J. L. Ouweltjes 346

An indentation meter for paint, by J. Hoekstra and J. A. W. van Laar 352

Dielectric losses in glass, by J. M. Stevels . 360

MISCELLANEOUS

Philips diamond jubilee 1

Scientific research of Philips' Industries from 1891 to 1951, by W. de Groot 3

Books written by scientists of the Philips' Research Laboratory 48

In memoriam Dr. h.c. A. F. Philips . . . 81

A simple ionosphere sounder, by R. Aschen and P. Gaillard 152

Automatic welding with Contact electrodes, by W. P. van den Blink, H. Bienfait and J. A. van Bergen 247

Electric fencing of grazing land, by F. H. de Jong and L. W. Roosendaal 328

BOOK REVIEW

B. G. Dammers, J. Haantjes, J. Otte and H. van Suchtelen, Application of the electronic valve in radio receivers and amplifiers. A. F. amplification, output amplification and power supply . . . 180